

# The Dalhousie Abortion Project\*

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One of the greatest problems in obstetrics today is spontaneous abortion. In Halifax, the incidence of pregnancy loss by abortion is approximately twelve percent, a figure which is in agreement with those of other studies in various parts of the world. Why does it occur? There are countless theories, but, like King<sup>1</sup>, we might summarize them as follows:

- (1) a defective fertilized ovum.
- (2) mechanical elements such as location of implantation, position of the placenta, and abnormalities of the uterine musculature.
- (3) toxic or psychologic factors.
- (4) a poorly prepared or nourished endometrium with circulatory impairment caused by conditions such as retroversion, cervicitis, or tumours.
- (5) an improperly maintained decidua due to hormone imbalances or vitamin deficiencies.

A study of the literature revealed that therapy based on any or all of the etiological theories noted above brought about the same therapeutic result. The only common denominator of the therapeutic successes appeared to be the emotional support the patient received from her enthusiastic doctor.

With the above findings in mind, we began an interdisciplinary study of all the different causative factors which were suggested to have etiological significance in premature interruption of pregnancy. Time does not permit the complete details of the study or the various findings, but one fact did stand out: the women who we were studying did not as a rule abort, and this in spite of the fact that they received no therapy other than the support resulting from the team study. In the beginning, this was just an impression; but encouraged by our success, we decided to extend our study to that of habitual aborters, i.e., women who had had three or more successive abortions. Malpas<sup>2</sup>, 1938, and Eastman<sup>3</sup>, 1956, have long held that the abortion probability after three successive abortions, without treatment, is approximately twenty-seven percent. What could we do with psychiatric support only?

Our routine was as follows: initially, these patients were seen in hospital where the following investigation was carried out:

- (1) general physical and pelvic examinations (including a vaginal smear).
- (2) urinalysis for hormone assay (17-ketosteroids and 17-hydroxycorticoids).
- (3) routine blood tests and Rose Waaler evaluations.
- (4) psychological tests.
- (5) psychiatric interviews.

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After this, the patient was discharged from hospital on the following regimen:

- (1) a weekly interview with our psychiatrist.
- (2) an interview with the patient's family doctor who was informed of our findings and encouraged to give the woman all the support and reassurance possible at prenatal visits.
- (3) close co-operation between the family doctor and our psychiatrist.
- (4) at least one interview between the husband and our psychiatrist.
- (5) the patient was encouraged to telephone the psychiatrist at any time; (she usually tested this once or twice to be sure it was genuine and then waited before calling again until a stress situation made it necessary.)
- (6) weekly forty-eight hour specimens of urine were collected and sent to the laboratory for hormone analysis (17-ketosteroids and 17-hydroxycorticoids).
- (7) At the completion of the pregnancy—either in abortion or the birth of a baby—the complete findings and history of the case were discussed by our group, and an attempt was made to correlate, (or determine a lack of correlation in), the psychiatric and obstetric findings on the one hand and the biochemical, hormonal, and pathologic findings on the other.

For the purpose of description, we have arbitrarily divided the therapy into four overlapping phases:

#### I. INITIAL PHASE:

1. First contact—establishment of rapport.
2. Explanation of project.
3. Mobilization of patient's motivation to participate on project.
4. Psychosomatic anamnesis.
5. Talks on anatomy and physiology of sex and pregnancy.
6. Prohibition of sex relations in first three to four months.
7. Rare prescription of small doses of phenobarbital or meprobamate; (hormones were *never* administered!)
8. Interview with husband.
9. If possible, personal contact with physician or obstetrician.
10. Rest was never emphasized. Short car excursions or airplane flights were not discouraged. (One habitual aborter undertook during her observed pregnancy two lengthy airplane trips—one of them a trans-Atlantic flight).

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## II. THERAPEUTIC PHASE:

1. Encouragement of dependency.
2. Continuous availability of psychiatrist.
3. Permission to telephone during minor and major stress periods.
4. Discussion of present life situation.
5. Discussion of past family relationships.

## III. WEANING PHASE:

1. After appearance of foetal movement, emphasis on patient's independence.
2. Shift of interest from the therapeutic situation to child-rearing process.
3. Shortened interviews.
4. Lengthened intervals between interviews.

## IV. PREPARATION FOR CHILDBIRTH:

1. Discussion of childbirth.
2. Talks about exercises and natural childbirth.
3. Relaxation.
4. Hypnosis.
5. Return to obstetrician.

In brief, we try to relieve stresses within and without our aborters principally by listening to and guiding them.

We were able to investigate thirty-eight habitual aborters. All of these received the initial investigation, but only nineteen were followed throughout their pregnancies by the above long term regime. The other nineteen, for various reasons (geographic, etc.), could not take advantage of the described routine and were followed with the routine prenatal care by their family physicians. These provided us with an ideal control group.

What was our success? The survival rate in our experimental group was eighty-four percent as compared with the control group of twenty-six percent. (Table I). This difference is highly significant. (Chi square 8.74; 0.01-p-0.005).

TABLE I

Results of pregnancies in experimental and control groups\*

DESCRIPTION	Total Cases	Full-Term Live Births		Abortions	Premature Deliveries
		No.	%		
<i>Experimental Group:</i>					
Habitual aborters given supportive therapy during pregnancy	19	16	84	2	1 (died)
<i>Control Group:</i>					
Habitual aborters interviewed on a maximum of two occasions	19	5	26	13	1

\*Chi square 8.74; 0.01-p-0.005

How did these two groups of women compare? The answer to this question was based on the following criteria: number of previous consecutive abortions, age, years married, education, number of previous live births, and occupation of husband. Table II indicates that the above-mentioned comparative data of these cases accidentally match well.

TABLE II

Comparison of the experimental and control groups in terms of matching variables.

Mean No. of Previous Abortions	Mean Age	Mean Education (Grade)	Median No. of Years Married	No. Who Had Children	Occupation of Husband
<i>Experimental Group:</i> 4.4	28.7	10.4	7.5	10	Military-9 Skilled Labourer-3 Unskilled Labourer-1 Clerical-1 Own Business-1 Farmer-1 Salesman-3
<i>Control Group:</i> 3.5	29.4	9.9	8	13	Military-8 Skilled Labourer-5 Unskilled Labourer-1 Clerical-1 Own Business-2 Farmer-1 Tradesman-1

## CONCLUSION:

We do not yet understand the etiology of many of the abortions, but it is becoming increasingly clear that emotions do play a part. If they do, then supportive therapy should be helpful; and the above small study would suggest that more than any other form of treatment, supportive therapy is capable of preventing pregnancy losses in habitual abortion.

## REFERENCES:

1. King, A. G.: *Obst. & Gynec.* 1:104, 1953.
2. Malpas, P.: *J. Obst. & Gynaec. Brit. Emp.* 45:932, 1938.
3. Eastman, N. J.: *Williams Obstetrics*, 11th ed. 1956.

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